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# Appendix A: Tax-Equivalency Worksheet

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This work sheet can be used to replicate the Uniform Bank Performance Report tax-equivalency adjustment.

## General Information

This Tax-Equivalency Worksheet is divided into four parts. Part I determines the amount of tax-exempt income that is available for tax benefit by comparing it to taxable income. Part II estimates the tax benefit for this amount of available tax-exempt income by determining the bank's marginal tax rate and multiplying by a percentage based on that tax rate. Part III describes the usage of this estimated tax benefit in the UBPR, in earning ratios, dollar amounts, and asset yield ratios. The "Definition of Preliminary Calculations" section describes the calculation of items for Part I using Report of Income items.

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## PART I: Determine the Amount of Tax-Exempt Income Available for Tax Benefit

### Preliminary Calculations

Calculate the following items according to the instructions in the last section of the Appendix:

- I. tax-exempt income (write the amount here and at "Final Part I Calculation," line b: \_\_\_\_\_ ;
- ii. pretax *taxable income*: \_\_\_\_\_ ;
- iii. total pretax income, *including* tax-exempt income: \_\_\_\_\_ ;
- iv. *total* applicable income taxes: \_\_\_\_\_ ;
- v. 100% non-deductible interest expense: \_\_\_\_\_ .

Alternatives for Part I—(Only *one* alternative is possible for any bank.)

#### Alternative 1

If the bank does not have any tax-exempt income, the tax-equivalent adjustment equals zero (0) and no further calculations are necessary. Otherwise, proceed to the next alternative. \_\_\_\_\_

#### Alternative 2

If pretax taxable income (preliminary calculation ii) *exceeds* tax-exempt income, or if pretax taxable income is greater than or equal to zero, write the amount of tax-exempt income here and at "Final Part I Calculation," line a, and proceed from there; otherwise, proceed to the next alternative. \_\_\_\_\_

#### Alternative 3

If pretax taxable income (preliminary calculation ii) is less than zero *and* total pretax income (preliminary calculation iii) exceeds zero *and* total applicable income taxes (preliminary calculation iv) is less than zero (e.g., the bank reports tax credits), perform the following calculation; otherwise, proceed to the next alternative.

Multiply the total applicable income taxes (preliminary calculation iv) by -1.67. Add the result to total pretax income (preliminary calculation iii). Write the amount here and at "Final Part I Calculation," line a, and proceed from there. \_\_\_\_\_

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#### Alternative 4

If total pretax income (preliminary calculation iii) is less than or equal to zero and total applicable income taxes (preliminary calculation iv) is less than zero, then perform the following calculation; otherwise, proceed to the next alternative.

Multiply the total applicable income taxes (preliminary calculation iv) by negative 1.67 (-1.67) for periods beginning in 1987, and by negative 2 (-2) for prior periods. Write the result here and at "Final Part I Calculation," line a, and proceed from there.

#### Alternative 5

If total pretax income (preliminary calculation iii) is less than or equal to zero and total applicable income taxes (preliminary calculation iv) are greater than or equal to zero, then the bank receives no calculated tax benefit. Enter a zero in Final Part I Calculation, line a.

#### Final Part I Calculation

a. Amount calculated using one of the six above alternatives:

b. Amount of tax-exempt income (preliminary calculation I):

Write the *lesser* of a. or b. here:

Subtract the amount of non-deductible interest expense (preliminary calculation vi):

If the result is zero or less, there is no tax-exempt income available for tax benefit. If the result is greater than zero, proceed with Part II using that amount.

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### PART II: Estimate the Tax Benefit for Available Tax-Exempt Income from Part I.

The tax benefit for the amount of tax-exempt income available for such benefit is estimated by: Calculating the annualized amount of net taxable income plus available tax-exempt income; determining the marginal income tax rate for this adjusted income figure; calculating the tax benefit based on the marginal tax rate.

#### A. Calculating Annualized Taxable Income Plus Available Tax-Exempt Income

In order to estimate the tax benefit of tax-exempt income, it is first necessary to calculate what the annualized taxable income would be if available tax-exempt income were included. Up to this point, all figures have been on a year-to-date basis. Perform the following calculation to determine annualized taxable income for tax-equivalency purposes:

1. Add: pretax taxable income (preliminary calculation ii):

Plus: available tax-exempt income from Part I:

Equals: year-to-date adjusted income:

2. Multiply the above result by the appropriate annualization factor:

Reporting Period Ending	Annualization Factor
March 31, 198x	4
June 30, 198x	2
September 30, 198x	1.333
December 31, 198x	1

Equals: annualized amount of taxable income plus available tax-exempt income

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**B. Calculating Estimated Tax Benefit:**

1. Find the appropriate tax benefit factor in the table below, based on the annualized income calculated above.

Annualized Income from Part II A	1986 or earlier		1987		1988 or later	
	Marginal Tax Rate (Percent)	Tax Benefit Factor	Marginal Tax Rate (Percent)	Tax Benefit Factor	Marginal Tax Rate (Percent)	Tax Benefit Factor
up to 25	15	.18	15	.18	15	.18
25-50	18	.22	16.5	.20	15	.18
50-75	30	.43	27.5	.38	25	.33
75-100	40	.67	37.0	.59	34	.52
over 100	46	.85	40.0	.67	34	.52

2. Enter the available tax-exempt income from Part I here: \_\_\_\_\_

Multiply by the tax benefit factor from the above table:

x \_\_\_\_\_

Estimated Tax Benefit (year-to-date): \_\_\_\_\_

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**PART III: Using the Estimated Tax Benefit in the UBPR**

The estimated tax benefit calculated in Part II, which is based on total tax-exempt income, is allocated back to tax-exempt loan & lease income and tax-exempt securities income.

The tax benefit is then added to pre-tax income and used in earnings presentations and yield ratios in the UBPR.

**A. Allocating Tax Benefit to Loans & Leases and Securities:**

Assign the estimated tax benefit from Part II back to the two sources of tax-exempt income as follows:

1. Calculate the ratio of tax-exempt loan & lease income to total tax-exempt income:

Tax-exempt loan & lease income (see "definitions of Preliminary Calculations, Paragraph i): \_\_\_\_\_

Divided by total tax-exempt income (preliminary calculation I):

÷ \_\_\_\_\_

Equals: ratio of tax-exempt loan & lease income: \_\_\_\_\_

2. Multiply the estimated tax benefit: \_\_\_\_\_

By the ratio calculated in 1.: \_\_\_\_\_

x \_\_\_\_\_

Equals estimated tax benefit for tax-exempt loan & lease income: \_\_\_\_\_

3. From the total estimated tax benefit: \_\_\_\_\_

Subtract: loan & lease tax benefit from 2.: \_\_\_\_\_

Equals: estimated tax benefit for tax-exempt securities income: \_\_\_\_\_

*Note:* The 100% non-deductible interest expense incurred to carry tax-exempt obligations, reported beginning with the March, 1987 reporting period, is reported in total for all types of tax-exempt obligations. This allocation of tax benefit back to loan & lease income and securities income may be disproportionate if the reported non-deductible interest expense is disproportionate between these two types of tax-exempt obligations.

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## B. Using and Presenting Tax Benefits in the UBPR

1. The tax benefits is allocated in A. above, are presented in the income dollar amounts on UBPR Page 02. For other than December reporting periods, these figures must be de-annualized by dividing by the annualization factor in Part II. They are carried through the pre-tax income and expense trail, and are subtracted back out when applicable income taxes are netted out.
  2. The tax-equivalent earning amounts, annualized, are used in the earnings ratios that appear on UBPR Page 01.
  3. The book and tax-equivalent income figures for loans & leases and securities are used in the yield ratios that appear on UBPR Page 03.
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## Definitions of Preliminary Calculations

### I. Tax-exempt income:

Add:

Tax-exempt loan & lease income:

(Interest and fee income on loan obligations of states and political subdivisions in the United States, plus tax-exempt lease income; using the Report of Income: \_\_\_\_\_

	3/84-12/86	After 12/86
Form 031:	1a(1)(h)+M2	1a(1)(h)(2)+1b(2)
Form 032:	1a(6)+M2	1a(6)(b)+1b(2)
Form 033:	M7+M2	M5+1b(2)
Form 034:	M3	M3

Tax-exempt securities income:

(Interest and dividends on tax-exempt obligations issued by states and political subdivisions in the United States; using the Report of Income: \_\_\_\_\_

	3/84-12/86	After 12/86
Forms 031, 032, 033:	1d(2)	1d(2)(b)
Forms 034:	M3	M3

Equals: Total tax exempt income: \_\_\_\_\_

These figures are presented on UBPR Page 02.

### ii. Pretax Taxable Income

Income (loss) before income taxes, extraordinary items and other adjustments (Report of Income item 8): \_\_\_\_\_

Plus: Extraordinary items and other adjustments, gross of income taxed (Report of Income item 11a): \_\_\_\_\_

Plus: Interest expense incurred to carry tax-exempt obligations acquired after August 7, 1986, that is not deductible for federal income tax purposes (Report of Income item M1 beginning 3/87; prior to 3/87, use zero): \_\_\_\_\_

Less: Tax-exempt income (preliminary calculation I.): \_\_\_\_\_

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Equals: total pretax taxable income:	_____
iii. Total Pretax Income	
Tax-exempt income (preliminary calculation I.):	_____
Plus: Pretax taxable income (preliminary calculation ii.):	_____
Equals: Total pretax income:	_____
iv. Total Applicable Income Taxes:	
Applicable income taxes (Report of Income item 9):	_____
Plus: Applicable income taxes on extraordinary items and other adjustment (Report of Income item 11a):	_____
Equals: Total applicable income taxes:	_____
v. 100% Nondeductible Interest Expense:	
Interest expense incurred to carry tax-exempt securities, loans, and leases acquired after August 7, 1986, that is not deductible for federal income tax purposes (report of Income item M1 beginning 3/87; prior to 3/87, use zero);	_____

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## Appendix B: Other UBPR Products and Ordering Information

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In addition to the individual bank UBPR, the FFIEC makes available other reports, and data tapes derived from UBPR data. Reports are available on line at [www.ffiec.gov](http://www.ffiec.gov). These items are:

### Peer Group Report

This report (approximately 400 pages) compiles the peer group ratio averages from all 25 peer groups that are prepared for presentation in UBPR's. The items in this report have the same definitions as those given in Section III, and the items are grouped as they are in the UBPR. Information is grouped by peer group in a format similar to the UBPR, with 5 quarters of information displayed. In addition, the Peer Group Report includes national averages for the same set of ratios. This report is produced quarterly, for the same data dates as the UBPR, and includes 10 pages per peer group.

### Peer Group Distribution Report

This report (approximately 400 pages) contains ten data values ranging from the 1st through the 99th percentiles for each ratio for the current reporting period report. This report is produced quarterly, for the same data dates as the UBPR, and includes 10 pages per peer group. The format is similar to the UBPR.

### State Averages Report

This report (approximately 75 pages) presents a single-page set of summary ratios for each State. The items are generally the same as those pre-

sented on the UBPR "Summary Ratios" page, plus three more ratios on non-current loans and leases. Each States page presents statewide ratio averages for five dates, plus averages for three asset-size groups in the State for the latest date. A page of national averages is also presented. This report is produced quarterly.

### State Average Distribution Report

This report (approximately 300 pages) contains ten data values ranging from the 1st through the 99th percentiles for each ratio for the current reporting period only. The format is similar to the State Average Report.

### UBPR Data Tapes

The data items presented in UBPR's peer group reports and state average reports are available in bulk format on magnetic tape. These tapes may be of use to requestors who wish to select or analyze data for large numbers of banks or peer groups. A typical UBPR edition would include a maximum of 17 tapes: eight unique tapes for bank data, eight unique tapes for bank rank data, and one tape for peer group and state average data. UBPR tapes will be available only for the current edition.

The types of UBPR data that will be available on tape are:

- R1—Bank-level ratio and dollar values:

Each tape will contain a record for each insured commercial bank for one data date. Each record will contain approximately 700 ratio or dollar values.

- R2—Peer group averages:

Each tape will contain a record for each of the 25 UBPR peer groups plus a record for all banks, for all of the data dates for that edition. Each record will contain approximately 330 average ratio values.

- R3—Bank percentile ranks:

Each tape will contain a record for each insured commercial bank for one data date. Each record will contain approximately 330 percentile rank values.

- R4 and R5—State and state/asset group averages:

Each tape will contain a record for each state plus a record for all banks. The same tape will also contain a record for each of three asset size groups in each state, plus a record for all banks in each of these asset sizes (\$0–25 million, \$25–100 million and over \$100 million); these size group records are present only for the latest data date for the edition. Each record will contain approximately 33 ratio averages, plus total assets and total net income.

All of the above items, as well as individual bank UBPRs, are available for purchase by the general public.

### UBPR Data Tapes

Requests for or inquiries about UBPR data tapes should be made to:

Federal Financial Institutions  
Council  
UBPR Coordinator  
2000 K Street, NW  
Suite 310  
Washington, DC 20006

Phone number 202-872-7500

E-MAIL: [smullenj@frb.gov](mailto:smullenj@frb.gov)